Outline and evaluate one or more biological explanation of schizophrenia.

P: Genetic research may be useful in trying to identify a specific gene that might be responsible for causing schizophrenia.

E: Sherrington has linked schizophrenia to an abnormality on chromosome 5, although these findings have not been replicated by others.

E: Hong et al found that a variation of the TPH gene was significantly more common in Chinese SZ patients than in Chinese controls.

L: This suggests that there is a biological basis for schizophrenia as there are specifically identified genes that are maladaptive in comparison to the rest of the population.

P: There are issues with the research evidence in adoption studies.

E: Clearly, not all schizophrenic mothers give their children up for adoption as many are still capable of parenting.

E: This means that there may be something different about these mothers that made them give their children up for adoption.

L: These differences may provide other reasons for the onset of SZ in the children.

P: Amphetamines support the dopamine hypothesis.

E: They increase the amount of excess dopamine which floods the synapses.

E: This causes hallucinations and delusions, similar effects to the characteristic factors of schizophrenia.

L: This provides evidence for the increase in dopamine as the responsible factor for schizophrenia as an increase caused by this drug causes positive symptoms.

ADO1

Genetic Factors:
- SZ runs in families
- probability of SZ in general population = 1%
- Family Studies - SZ is more common among biological relatives, the greater the degree of relatedness the greater the risk:
  - children with 2 SZ parents = 46% risk
  - children with 1 SZ parent = 13% risk

- Twin Studies - meta-analysis
  - MZ twins = over 40%
  - DZ twins = over 7%

- Adoption Studies - 164 adoptees, Finland
  - biological mothers diagnosed with SZ
  - 6.7% children diagnosed
  - (4.2% control group diagnosed)
  - genetic liability to SZ “decisively confirmed”

The Dopamine Hypothesis:
- “Neurotransmitters are chemical messengers that carry, boost or moderate signals between neurons”
- SZ results from having an excess of the neurotransmitter dopamine
  - too much dopamine
  - too many dopamine receptors
  - dopamine receptors too sensitive
- Dopamine found in the limbic system, disturbance in processes leads to problems in perception experienced by SZ’s.

ADO2

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Golden Nuggets

Family Studies
Twin Studies
Adoption Studies
Excess Dopamine
Limbic System
Identifying Gene
Adoption Issues
Amphetamines